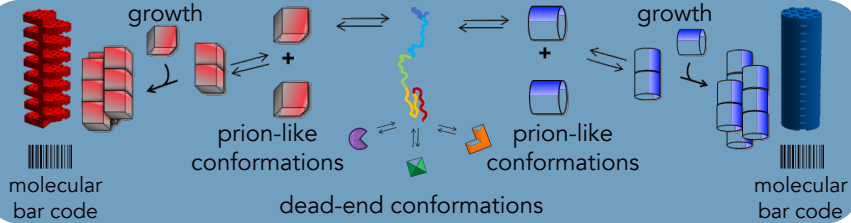# PD-MitoQUANT

A quantitative approach towards the characterisation of mitochondrial dysfunction in Parkinson's Disease

Highly characterized pathogenic fibrillar αSyn polymorphs

growth

growth

prion-like conformations

prion-like conformations

dead-end conformations

molecular bar code

molecular bar code

In vitro models

αSyn toxicity in primary neurons
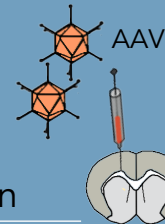
iPSC-derived neuronal PD model

Direct reprogramming

3D culture model

In vivo models

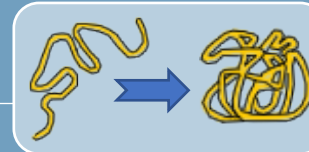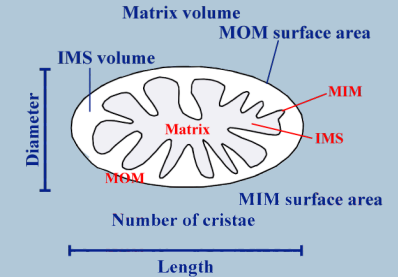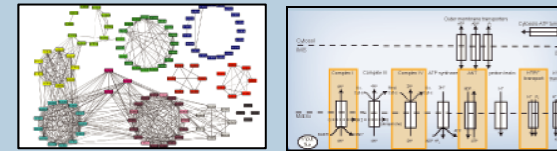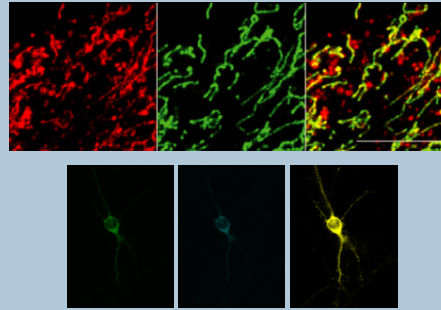Intra-striatal αSyn injection

AAV

αSyn overexpression

Mitochondrial assays

Bioenergetics & Dynamics

Morphofunction studies

Matrix volume

MOM surface area

IMS volume

MIM

Diameter

Matrix

IMS

MOM

MIM surface area

Number of cristae

Length

Proteostasis & stress response

Identification of master regulators

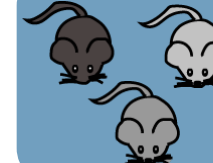## High throughput target validation platforms

C. Elegans

Drosophila

End point assays & signature validation platforms

Transgenic models

PD patient biobank
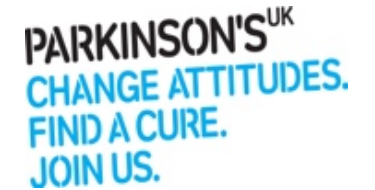
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imi innovative medicines initiative

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Academic partners

RCSI

ICM — Institut du Cerveau et de la Moelle épinière

CNRS

UCL

DZNE — Deutsches Zentrum für Neurodegenerative Erkrankungen in der Helmholtz-Gemeinschaft

Consiglio Nazionale delle Ricerche

Radboud umc

EFPIA partners

teva | ucb | Lundbeck ★

Patient organisation

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SME partners

MIMETAS — the organ-on-a-chip company

geneXplain

Project management

Pintail

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